

**UDE**  
 Universal  
 Design for  
 Employment

Inclusive  
 Technology  
 Solutions, LLC

**Mike Marotta, ATP**  
**@mmatp**

**bit.ly/aztransition16**

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**Mike Marotta, ATP**  
**Inclusive Technology Solutions, LLC**

RESNA Certified Assistive  
 Technology Professional (ATP)



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Using Chromebooks in the Classroom Quick Card



Topics include:

- Chromebook Features
- Google Apps for Education
- Built In Accessibility
- App & Extensions Across the Curriculum
- Strategies for Implementation

[tinyurl.com/chromecard](http://tinyurl.com/chromecard)



Features of the Quick Card:

- Contains Essential Core Concepts
- Laminated, Durable, Easy-To-Carry, 3 Hole-Punched 8.5" x 11" Pages
- Valuable Desk Reference
- Excellent for Orientation & New Initiatives
- Simplifies Complex Topics
- Clear, Concise, Comprehensive
- Excellent for Training & Staff Development
- Comes in Various Formats [Bi-Fold (4 pages) or Tri-Fold (6 pages)]
- Helps Create A Common Vocabulary

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**Mystie Rail**  
 Assistive Technology of Alaska - ATLA  
[mystie@atlaak.org](mailto:mystie@atlaak.org)  
[www.atlaak.org](http://www.atlaak.org)  
 @akmrail

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**Make sure to participate using**  
[todaysmeet.com/AT4UDE](http://todaysmeet.com/AT4UDE)

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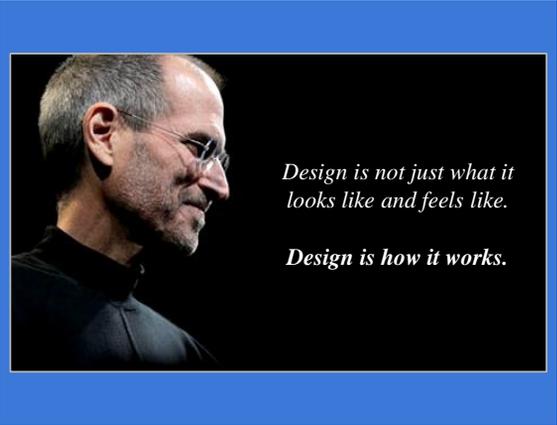
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A meme featuring a woman with a concerned expression, looking slightly to the side. The text "I SEE BAD DESIGN" is overlaid at the top, and "EVERYWHERE" is overlaid at the bottom. The image is framed by a blue border.

**Who is UDE for?**

Good design goes to heaven...

**Bad design goes everywhere!**

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### Universal Design

- strategy for making products, environments, operational systems and services welcoming and **usable to the most diverse range of people possible**
- integrated into **devices, environments, processes and systems**



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### Inclusive Workplace

- broad-spectrum ideas
- a workplace that maximizes **ALL people's abilities** through:
  - Universal Design
  - Policies and Procedures
  - Company Values



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Important to Remember .....

UDE and Job Accommodations

- Universal Design **MAY** eliminate need for specialized job accommodations
- Provide a safer, more productive environment for **ALL** employees

UDE and Job Accommodations

- Universal Design would not eliminate the need of individualized accommodations in some situations.




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Don't Forget to Share Ideas...




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“  
*Creating and managing a diverse workforce is a process, not a destination.*  
 ”  
 -R. Roosevelt Thomas, Jr.

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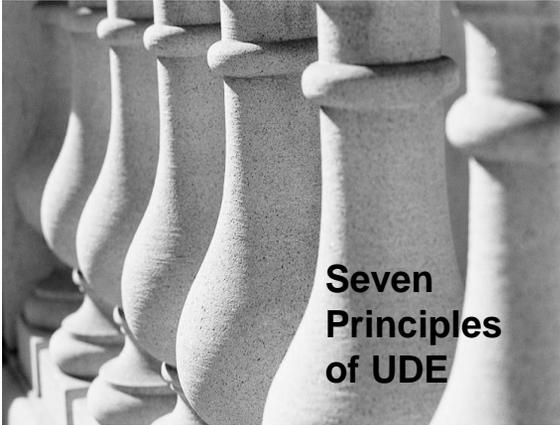
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**1. Equitable Use**

The Design is **useful and marketable** to people with diverse abilities

Provide the same means of use for **all users**

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**1. Equitable Use**

The Design is **useful and marketable** to people with diverse abilities

Avoid **segregating or stigmatizing** any users

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**1. Equitable Use**

The Design is **useful and marketable** to people with diverse abilities



**Privacy, security, and safety** should be equally available

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**1. Equitable Use**

The Design is **useful and marketable** to people with diverse abilities



Make the design **appealing to all users**

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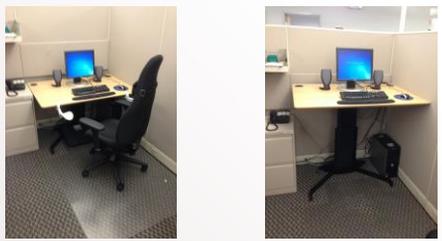
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**1. Equitable Use**

The Design is **useful and marketable** to people with diverse abilities



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### 1. Equitable Use

The Design is **useful and marketable** to people with diverse abilities




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### 2. Flexibility in Use

The design accommodates a wide range of **individual preferences and abilities.**



Provide choice in methods of use.

Facilitate the user's accuracy and precision.

Provide adaptability to the user's pace.

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### 2. Flexibility in Use

The design accommodates a wide range of **individual preferences and abilities.**

- Cathy
  - Works at Fast Food Restaurant
  - Job Responsibility:
    - Make Salads
  - Tasks:
    - Add ingredients
    - Package
    - Move Product




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### 3. Simple and Intuitive Use

**Use of the design is easy to understand,** regardless of the user's experience, knowledge, language skills, or current concentration level.

- Eliminate unnecessary complexity.
- Accommodate a range of literacy and language skills.
- Arrange information consistent with importance.



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### 3. Simple and Intuitive Use



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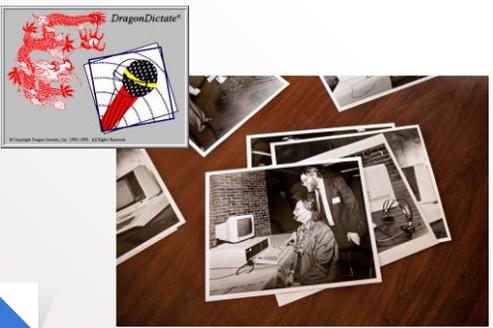
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### 3. Simple and Intuitive Use



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### 3. Simple and Intuitive Use




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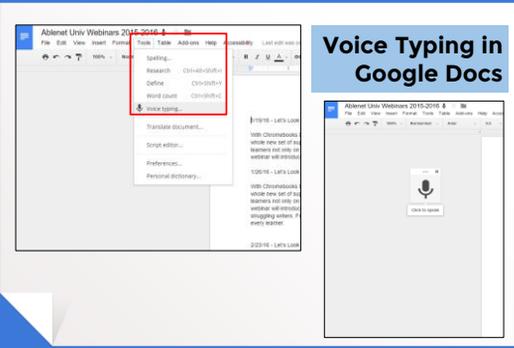
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### 3. Simple and Intuitive Use




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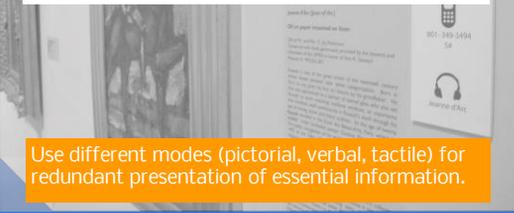
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### 4. Perceptible Information

**The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.**




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### 4. Perceptible Information

**The design communicates necessary information effectively to the user,** regardless of ambient conditions or the user's sensory abilities.



Provide adequate contrast between essential information and its surroundings.

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### 4. Perceptible Information

**The design communicates necessary information effectively to the user,** regardless of ambient conditions or the user's sensory abilities.



Maximize "legibility" of essential information.

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### 4. Perceptible Information

**The design communicates necessary information effectively to the user,** regardless of ambient conditions or the user's sensory abilities.



Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

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### 4. Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

- Peter
  - Works at Car Dealership
  - Job Responsibility:
    - Sales
  - Tasks:
    - Sell! Sell! Sell!
    - and....do LOTS of Paperwork!




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### 4. Perceptible Information

Access to Print Materials

Prizmo (iOS & Mac)      Text Detective (Android & iOS)

ClaroPDF & ScanPen (iOS)

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### 5. Tolerance for error

The design minimizes hazards & the adverse consequences of accidental or unintended actions.



- Arrange elements to minimize hazards and errors
- The most used elements are most accessible
- Hazardous elements are eliminated, isolated, or shielded

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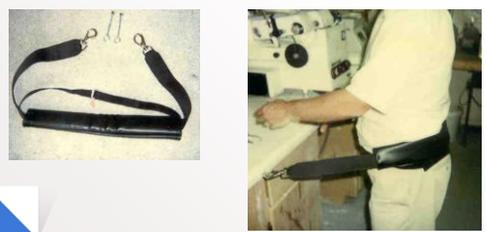
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### 5. Tolerance for error

The design **minimizes hazards & the adverse consequences** of accidental or unintended actions.



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### 6. Low physical effort

The **design can be used efficiently and comfortably**, and with a minimum of fatigue.



- Allow user to maintain a neutral body position.
- Use reasonable operating forces.
- Minimize repetitive actions.
- Minimize sustained physical effort.

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### 6. Low physical effort

The **design can be used efficiently and comfortably**, and with a minimum of fatigue.



- Kathleen
- Provides Information & Referral telephone services
- Accommodations:
  - ErgoQuest Desk & Chair
  - Custom made swivel base

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### 7. Size and space for approach and use

**Appropriate size and space** is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility



- Provide a clear line of sight to important elements for all user.
- Make the reach to all components comfortable for any seated or standing user.
- Provide adequate space for the use of assistive devices or personal assistance.

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### 7. Size and space for approach and use

**Appropriate size and space** is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility



- Eddie
  - Works at NJ State Aquarium
  - Job Responsibility:
    - Greeter
  - Tasks:
    - Welcome Visitors
    - Provide Directions

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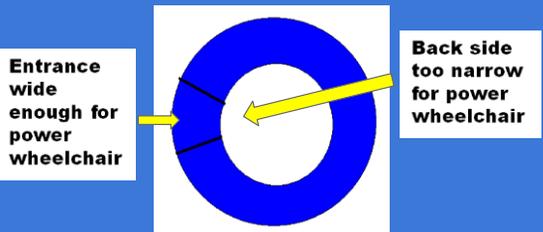
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### 7. Size and space for approach and use

**Appropriate size and space** is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility

The Problem!




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### 7. Size and space for approach and use

**Appropriate size and space** is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility

The Solution!



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### Caveats to UDE Principles

There is NOT a checklist or how-to list



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### Caveats to UDE Principles

Principles alone are not enough. Aesthetics are part of good design.



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What will be the next BIG THING in AT??



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The Future of Chromebooks?



Read about it on my blog!  
[mmap.com/2015/12/05/chromebit-unboxing/](http://mmap.com/2015/12/05/chromebit-unboxing/)



The Chromebit from ASUS (\$85)

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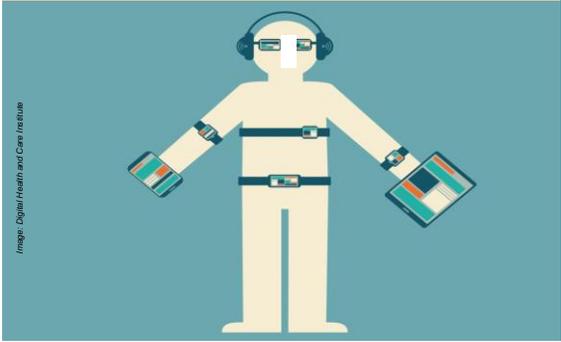
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# Wearables




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What does "Wearable" mean to you?



Consumer Technology Association predicts  
**38 million** wearables will be sold this year

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Apple WATCH



Android




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### DOT Braille Smart Watch

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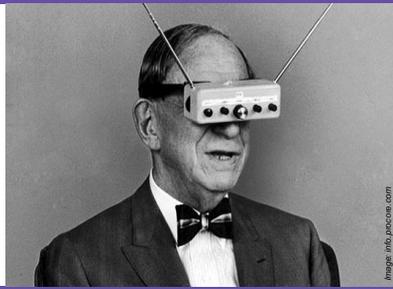
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### Virtual Reality



### Augmented Reality

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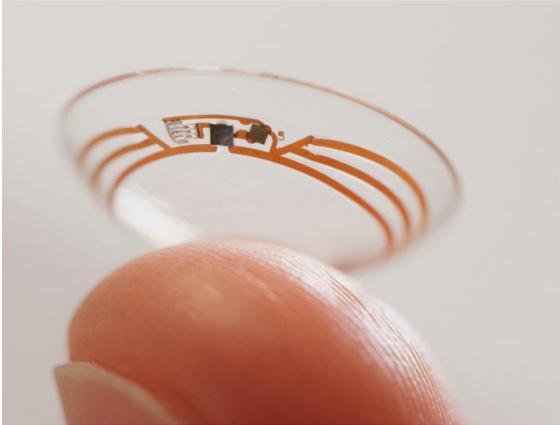
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**Google Cardboard**



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**How will this impact individuals with disabilities?**



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Echo as AT



Home Automation

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Echo as AT



Read your Kindle Books!

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## Echo as AT

Ask Alexa.....

- For the definition of a word
- Set a timer for breaks / transition to another activity
- To spell a word
- Add tasks to a to-do list
- Solve math problems




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## What's next?




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## Process for Choosing AT

- Define the Situation
- Explore available AT Options
- Choose AT
- Implement AT
- Monitor and upgrade AT




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### Employer Strategies UDE and an Inclusive Workplace



#### How can we as AT Professionals help employers?

- Consider what you want to achieve and what the benefits will be.
- Undertake an inclusion review of the workplace.
- Decide where work is needed and create an action plan.
- Communicate the plan with staff and put the plan into action.
- Review, monitor and evaluate the plan's impact and use what you find to plan future action.

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### UDE and an Inclusive workpla

# BENEFITS



- Attract new talent
- Retain productive and committed staff
- Create wider customer appeal
- Access to untapped markets
- Create culture change that spreads to communities
- Studies show that accommodations for workers with disabilities also benefit non-disabled workers

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### UDE and an Inclusive workpla

# BENEFITS



- Flexibility in scheduling and telecommuting can lead to reduced costs in office space and HR costs from staff turnover
- Everyone benefits! It doesn't segregate and stigmatize one population
- Opens opportunities for dialogue with employers

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**THANKS FOR SHARING YOUR BRAINS!**



mike@mmatp.com



www.mmatp.com



@mmatp

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